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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Engineering

M O N T H L Y N E W S L E T T E R

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On November 12 the members of the Washington office staff held a birthday luncheon in honor of George M. Warren, Associate Hydraulic Engineer, who will retire at the end of this month. His fellow workers presented him with an arm-chair as a token of the occasion.

Mr. Warren entered the Department service in 1909, as an office engineer in Drainage Investigations, then a part of the Office of Experiment Stations. He was later transferred to the Rural Engineering work under the Office of Public Roads and Rural Engineering, and when the Bureau was organized he became a member of the Division of Structures of which Wallace Ashby is Chief.

He is a graduate of the Worcester Polytechnic Institute having the degree of B.S. in C. E. Among other positions which he held prior to entering the Government Service was that of Assistant Engineer of Newton, Mass., Principal Assistant and Superintendent of Construction for Louis E. Hawes, Hydraulic Engineer of Boston, Mass., and Chief Engineer for Robert Filter Manufacturing Co., Philadelphia, Pa. He is a member of the Boston Society of Civil Engineers and of the American Society of Agricultural Engineers.

Mr. Warren is author of 10 publications of the Department which have had a combined circulation of 1 3/4 million copies. Most of these publications relate to drainage, farm water supply, sanitation, and plumbing.

Mr. McCrory left Washington November 12 for an extended field trip which will take him away from the city the entire month. His first stop was at Houston, Texas, where from November 16 - 18 he attended the meeting of the Association of Land Grant Colleges. He then left on an inspection trip which took him to Roswell and Albuquerque, New Mexico, in connection with the Migratory Waterfowl work we are doing for the Bureau of Biological Survey. He plans to spend a day with Colin A. Taylor at Pomona, Calif., looking over the work at that point, leaving there for Las Vegas, and thence to Chicago, Ill. to attend the meeting of the Power and Machinery Division, A.S.A.E. November 30 to December 3.

The following are the work accomplishments reported by the Central District CCC Drainage Camps for October: 2,230,239 cubic yards of excavation and embankment, using 33,336 man days; 5,945,502 square yards of clearing, using 36,104 man days; 42,458 linear feet of tile lines reconditioned, using 4,605 man days; 12,667 man days were used in doing miscellaneous work, such as repairing outlet structures, seeding levees, rebuilding fences, etc. The estimated commercial value of work performed during

October was \$567,516.64, and the cooperation furnished by the various districts totaled \$113,487.01.

A conference of the Ohio camp superintendents and engineers was held at Findlay, Ohio, November 19, and at Columbus, Ohio, November 20 and 21. Messrs. Lewis A. Jones, John G. Sutton and Fred F. Shafer represented the Bureau at the conferences. The first day was devoted to a joint conference with the Army and educational advisers. Major General C. E. Cole and officers of his Fort Hayes staff, represented the Fort Hayes District. The conference at Columbus was devoted to administrative and technical problems of operation of the CCC drainage camps. The technical sessions were held at Ohio State University and in cooperation with the Agricultural Engineering staff.

D. L. Bevans, Superintendent Camp D-3, South Bend, Indiana, made a radio talk on November 5 over Station WSBT, South Bend.

On November 15 Chas. A. Bennett left Stoneville, Miss. for an indefinite period of travel en route to Houston, Texas, and other points in the cotton belt, in connection with the cotton ginning investigations.

A special trip to Auburn, Ala. was made by T. L. Baggette, for the purpose of assisting in certain ginning tests.

S. P. Lyle of the Washington office visited Stoneville, Miss. on November 12 in company with T. N. Jones, Cotton Specialist of the State of Mississippi.

W. W. McLaughlin arrived at New York October 23 after visiting England, Scotland, Holland, Germany, Denmark, and Sweden. In addition to the International Snow Survey Conference at Edinburgh, which he attended, one of the high lights of the trip from an engineering and agricultural standpoint was a visit to the Zuyder Zee Reclamation Project in Holland, where he was shown over the project by the chief engineer. A series of dikes has been constructed for the purpose of cutting off an arm of the North Sea, the area then being drained, thereby creating at least three land units of from 50,000 to nearly 400,000 acres each, and an inland lake, the sea water of which is gradually being drained off and replaced by fresh water. The first land unit of 50,000 acres is completed and a considerable part of it is in crops. The land is sufficiently sweetened for cropping in from 2 to 4 years. The hotel at Slootdorp at which Mr. McLaughlin stayed was built on ground that 2 1/2 years before was under the sea. At present farms in the reclaimed area are rented. The final land policy had not been determined as yet.

Another project of interest was the 7,000 acre sewer farm maintained by the City of Berlin, which produces from 30 to 40 percent of all the vegetables used in that city, two or three crops being grown on the same land each season. The sewage is pumped into small settling reservoirs and the effluent, without treatment, is distributed to the land through ditches about 12 to 16 inches deep and 8 to 15 feet apart. It is a sort of sub-irrigation system for the purpose of fertilization of the soil. The farm units are rented to German farmers who operate under direction of the manager appointed by the City.

Wells A. Hutchins returned to Berkeley from Albuquerque, November 1, to prepare the preliminary report on State water laws as affecting the activities of the Soil Conservation Service in Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. This work is being done in cooperation with the Soil Conservation Service, Region 8.

On the irrigation water-supply forecasting project, George D. Clyde prepared a report of the Utah Cooperative Snow Survey Network. Soil moisture determinations were made at all snow courses on the Logan River watershed prior to the occurrence of the fall and early winter precipitation. All cabins in northern Utah and on the Virgin River were stocked for the winter's work. In Colorado, 8 additional snow courses were established under the supervision of R. L. Parshall.

On the Rio Grande investigation for the National Resources Committee, field studies on consumptive use of water was continued in all sections of the valley under the supervision of H. F. Blaney. The mapping of vegetative cover in the San Luis Valley, under the direction of Carl Rohwer, was continued, an area of 600,000 acres being covered during October. Field parties working under the direction of Fred C. Scobey completed the mapping of the Rio Grande Conservancy District upstream as far as Bernalillo. A large amount of other map work and computation of areas was completed under Mr. Scobey's direction, including the rough-draft base map of San Luis Valley.

Manuscript for a technical bulletin on "Irrigation of Subtropical Fruit" was completed by Colin A. Taylor.

Collection of silt samples of the Colorado River at Austin, Texas, begun in September, was continued until October 6 by Harry G. Nickle. Percentage of silt by weight was determined for each and it is expected soon to obtain the record of the discharge of the river during this period from the U.S.G.S. and prepare a graph showing silt percentage and total amount of silt carried throughout this period.

Several conferences with regard to the Grand Lake Transmountain Diversion Project, Colorado, were attended by R. L. Parshall. The plan of organization is now being developed by attorneys of both the Bureau of Reclamation and the Northern Colorado Water Users Association. It is hoped that some plan can be worked out based in part on the conservancy district idea in combination with a water users association. Joint liability relations are a question of considerable concern.

E. M. Mervino continued his tests of the sugar beet harvester by moving it to Iowa during the latter part of October. Fall rains and wider spacing of beets there caused an entirely different type of plant growth but the harvester performed in a satisfactory manner.

A report by S. W. McBirney on the year's work on sugar beet planting equipment has just been completed. The planter which was used for the experimental plantings showed some improvement over the regular planters in common use, but it is still far from being as good as hand planting in securing uniform germination stands with a high percentage of single seedlings. The use of the smaller sizes of screened seed resulted in higher percentages of singles, but the average of all sizes of screened seed was no better than unscreened seed.

A fertilizer-placement attachment under development by the S. L. Allen and Co., for a multiple-row vegetable seeder was observed in a field trial at Norfolk, Va., by G. A. Cumings on November 6. The general arrangement of equipment corresponds closely to that employed by the Bureau a year ago in spinach tests. The commercial development is in connection with a 5-row drill and the fertilizer shoes which are located in front of the seeding units can be adjusted both laterally and vertically as desired. Apparently there is considerable demand for improved fertilizer placement machines of this type, which have not heretofore been available for the vegetable crops grown in closely spaced rows. The cooperative experiments with kale and spinach at Norfolk were also inspected by Mr. Cumings. The kale tests, particularly, showed a decided advantage of placing fertilizer in a band at the side of the row, compared to local commercial methods or placements directly under the seed.

W. M. Hurst and George Stafford recently made field observations of soybean harvesting machinery in the vicinity of Elizabeth City, N.C. and Norfolk, Va. Small combines are being used in these areas to some extent but horse drawn machines of the stripper type are still in demand. A single-row horse-drawn soybean combine with all moving parts driven by a gasoline engine is also apparently giving satisfactory performance. Horse-drawn machines are in demand because of the lack of tractors and the small acreage of beans on many farms.

W. R. Humphries reports the field tests on the Rust cotton picker at Stoneville, Miss. and the field tests on small combines in harvesting soybeans in the Mississippi Delta have been completed. The cotton picker was tested in four fields of several varieties of cotton commonly grown in the Delta section. A section in each field was set aside for hand picking for comparative purposes. The soybean crop in a large area of the Delta was a failure so that few machines were being operated. Those tested with one or two exceptions, were found to be giving satisfactory performance.

The demonstration model of the reading machine for viewing 35 mm. film has been completed by E. M. Dieffenbach. He is preparing a set of instructions for the use of others who wish to construct similar units.

On October 28 A. H. Senner attended a meeting of Bottled Gas Association at Atlantic City, N.J.

J. W. Rockey has been appointed Junior Agricultural Engineer in the Division of Structures and reported for duty November 16 to take up work on farm water supply and sewage disposal heretofore handled by Mr. Warren.

W. B. Combs of the Chicago office of the Grain Division, B.A.E. is in Washington this week consulting with engineers on the wheat storage project and going over the results of this year's work.

C. F. Kelly who has been at Fargo, N.D. on grain storage project has disposed of the wheat and discontinued this season's experiments. He will remain in Fargo a short time to finish his report, when he will return to the Washington office.

Publications issued:

None.